

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Interference Immunity Performance	)	ET Docket No. 03-65
Specifications for Radio Receivers	)	
	)	
Review of the Commission's Rules and	)	MM Docket No. 00-39
Policies Affecting the Conversion to	)	
Digital Television	)	

To: The Commission

**COMMENTS OF ITRON, INC.**

Itron, Inc. ("Itron"), by its attorneys, hereby submits these comments in response to the Commission's Notice of Inquiry concerning the adoption of receiver interference immunity performance specifications.<sup>1</sup> As set out below, continued reliance on the market to set appropriate receiver interference tolerance will ensure the most efficient, varied, and productive use of unlicensed spectrum.

**I. Introduction**

Itron is the nation's leading manufacturer and supplier of automatic meter reading ("AMR") technologies using unlicensed Part 15 devices that operate in the 902-928 MHz band. Itron supplies its RF-based AMR systems to electric, gas, and water utility companies nationwide. Itron's AMR systems enable a utility to monitor business and residential meters from a remote location using a hybrid architecture that employs both licensed and unlicensed frequencies. Itron has

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<sup>1</sup> *Interference Immunity Performance Specifications for Radio Receivers; Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, Notice

provided more than 20 million meter modules to more than 850 utility companies nationwide, and Itron customers have invested over \$1 billion in their AMR networks. Itron's customers use these networks to provide the public at large with services that the Commission has described as "essential."<sup>2</sup>

## II. Discussion

With respect to receiver interference immunity standards, Itron supports the Commission's initial conclusion that "it is preferable to rely primarily on market incentives and voluntary industry programs . . . rather than formal mandatory standards incorporated to [its] rules."<sup>3</sup> While this principle applies across all services, it is nowhere more true than with respect to the unlicensed frequency bands.

Interference immunity specifications simply are unnecessary in the unlicensed bands because usage of devices in those bands is premised on the fact that there is no protection from interference from any other user, licensed or unlicensed. Therefore, manufacturers have adequate incentive to make their devices as robust as possible for applications in which interference would be a serious concern to consumers. If, on the other hand, consumers can accept certain levels of interference, they will benefit from the lower cost of products that are not quite so resistant to interference. If, in the face of such marketplace incentives, the Commission were to impose regulatory specifications for

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of Inquiry, ET Docket No. 03-65, MM Docket No. 00-39, FCC 03-54 (rel. Mar. 24, 2003).

<sup>2</sup> See *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies; Establishment of Public Service Radio Pool in the Private Mobile Frequencies Below 800 MHz; Petition for Rule Making of the American Mobile Telecommunications Association*, Report and Order and Further Notice of Proposed Rule Making, WT Docket No. 99-87, 15 FCC Rcd 22709, 22711-12 (2000).

<sup>3</sup> Notice of Inquiry ¶2.

interference immunity it would chill innovation, as well as efficient and flexible use, in the unlicensed bands.

Regulation of receiver immunity in the unlicensed bands will undermine unlicensed users' ability to meet their own needs. Under the Commission's current policies, manufacturers have incentives to protect their devices from harmful interference and consumers are free to choose among the receivers that best balance cost and interference immunity. Consumers do not purchase equipment that is insufficiently immune to interference, forcing manufacturers to design equipment with adequate tolerance. If the Commission, rather than the market, requires manufacturers to adopt interference immunity technology, manufacturing and equipment costs will increase unnecessarily. Consumers ultimately will be forced to bear these costs, and, in cost-sensitive markets, interference immunity mandates may prevent otherwise viable uses of the unlicensed bands. This result runs directly counter to the ideals of unfettered public access that underlie unlicensed spectrum.<sup>4</sup>

Furthermore, in unlicensed bands, the effect of future modulation techniques on current receiver technology is impossible to predict. Receiver requirements based on today's radio frequency environment may not prevent interference in the future. Instead, such standards will likely increase the volatility of the radio frequency environment. This volatility will threaten existing investment, discourage future investment, and disadvantage manufacturers and consumers that focus on high reliability and long product life. In order to foster continued investment in and development of the unlicensed bands, the Commission should not impose unnecessary standards.

The development of unlicensed radio services, and the public's increasing reliance on them, has been one of the great successes of the Commission's

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<sup>4</sup> See, e.g., *Spectrum Policy Task Force Report*, ET Docket 02-135 (rel. Nov. 15, 2002)

spectrum management policies. The unlicensed bands allow for innovative, varied, and efficient use, which the Commission has fostered by carefully crafting rules that allow diverse uses. Any imposition of uniform immunity standards for the unlicensed bands will necessarily limit the versatility that has been their hallmark. To foster continued development and use of diverse services in the unlicensed bands the Commission should avoid imposing new limits on the unlicensed services and allow the market to dictate appropriate receiver interference immunity.

Interference immunity standards are similarly unnecessary for the licensed bands. Current restrictions on transmissions work, essentially, as interference tolerance requirements. These restrictions set minimum amounts of interference that devices in the licensed bands must tolerate in order to be entitled to protection. Manufacturers must design their devices to withstand these levels of interference, but have the freedom to innovate as long as these minimum standards are met. Furthermore, despite the reduced degree of co-channel interference in the unlicensed bands, manufacturers nevertheless have incentives to design their products with adequate adjacent channel, overload, and related receiver performance specifications. As in the unlicensed bands, unnecessary regulatory mandates would impose costs on manufacturers and consumers and stifle the development of new technologies. Consequently, for both licensed and

unlicensed bands, the Commission should rely on the discipline of the market, coupled with existing regulation, to set interference immunity requirements for receivers.

Respectfully submitted,

ITRON, INC.

A handwritten signature in black ink that reads "Henry Goldberg". The signature is written in a cursive style with a horizontal line above the text.

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